2312

ChemRisk/Shonka Research Associates, Inc., Document Request Form

(This section to be completed by subcontractor requesting document)

TORNNETT / K-25 ER DMC

Requestor / Document Center (is requested to provide the following document)

Date of request 9/5/95 Expected receipt of document _____

Document number ER0019544 Date of document 9/24/91

Title and author (if document is unnumbered)
Letter = Approved Preliminary Hazard Screening (PHS) Document for K-1210-A - C.C Watson to L.D. Bates

Name ADC Reviewer Jerry Spence
Date Sent to ADC 9/6

(This section to be completed by Document Center) Date(s) Cleared 9/6/95

Date request received 9/1/95

Date submitted to ADC 9/6/95

Date submitted to HSA Coordinator 9/18/95

(This section to be completed by HSA Coordinator)

Date submitted to CICO 9/19/95

Date received from CICO 9-19-95

Date submitted to ChemRisk/Shonka and DOE 9-28-95

(This section to be completed by ChemRisk/Shonka Research Associates, Inc.)

Date document received _____

Signature _____

MARTIN MARIETTA

Internal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

September 24, 1991

L. D. Bates, Division Manager - Environmental Restoration

Approved Preliminary Hazard Screening (PHS) Document for K-1210-A

The K-25 Safety Analysis Review Group has reviewed and approved the PHS for your facility. Copies are attached for information and use by your office and your facility manager. The original will be maintained by the K-25 Site Installation Facility Safety Manager (IFSM).

The PHS identified one or more hazards requiring additional analysis, the next step in the Safety Analysis Report Update Program (SARUP). Therefore, a copy will also be provided to the Hazard Analysis Project Engineer for use in assisting your Facility Safety Evaluation Team (FSET) and/or Facility Manager in completing the Hazard Analysis.

Any proposed changes to the facility, operations or systems must now be evaluated and documented using the PHS criteria. Any original documented reevaluation must be sent to the IFSM for review and approval.

The PHS is your "interim license" pending completion of the Hazard Analysis. Conformance of your facility to the criteria is subject to review by the Facility Safety Department. DOE Order 5480.5 requires an annual appraisal of each facility to assess aspects of facility operation including conformance to safety documentation (DOE 5480.5-9.g,h). Guidance on such appraisals will be issued by the Health, Safety and Environmental Management (HS&EM) Division.

Should you have any questions about the PHS or remaining steps in the program, contact the IFSM, Cliff Watson at 6-7860.

C. C. Watson, K-1020, MS-7403, K-25 (6-7860)

CCW:mr

Attachment

cc w/att: R. C. Keever (Building Operator)
John Bolling (Emergency Preparedness Department Manager)
K-25 System Safety Engineering - RC
File - IFSM (2)

The Oak Ridge K-25 Site is managed by Martin Marietta Energy Systems, Inc., for the U.S. Department of Energy under contract DE-AC05-84OR21400.

PHS/K-1210- F-1253 1/9-17-91

PHS TRACKING/TRANSMITTAL

Bldg. K-1210-A

To: Phase I Document Coordinator 04/17/91

see comments incorp'd 5/24/91

To: L.D. Bates / /
Division Director

OK [ ] or RETURN TO FSET [ ]
with attached comments

To: KSARG Chair 8/20/91 KEEP

OK [✓] or RETURN TO DIV. [ ]
with attached comments

To: PSET ~~N/A~~ 9/17/91

SIGNED [ ] or RETURN TO DIV. [ ]
with attached comments

KSARG – Do 13.8 inside the alley? – YES! Screen in Hi Volt.

Also identified & screen in active 38 cell battery bank. MAH.

PHS/K-1210-A/PK/253.1/9-17-91

Preliminary Hazard Screening No.: _____

PRELIMINARY HAZARD SCREENING WORK SHEET

Facility Location: K-1210A Room(s): _____

Facility Manager: R.C. KEEVER Division: A&D Year Built: 1977

R.C Keever 5.21-91

Facility/Description: (circle or shade on map, page 6)

The K 1210 A Facility (Formerly AETF) SEE ATTACHED. HAS been decommissioned And currently not used. the EAST (Feed Rm section) HAS some Stored Contaminated piping. EAST of Facility (outside) a storage AREA is used to store chemical materials used in process.

Waste Storage Locations:

Description of Stored Material:

Contaminated piping in EAST end of Bldg and chemical (outside) in Caged Storage Area

Division Mgr/Rep 8/7/91 Date

KSARB Review 9/17/91 Date

JERRY NORTON/DICK WAGENBLAST 5/5/91 FS/SSE

PSET Approval N/A 9/17/91 Date

FACILITY K-1210 A
FSET LDR KEEVER
R.C.K 5-21-91

Preliminary Hazard Screening Worksheet

HAZARD	MEASURE	ACTION*	ACTION DECISION	ACTION DECISION BASIS
RAD WASTE	>0.002 μCi/g	KEEP	KEEP	PIPING STORED IN EAST END } 4 Kg U
RADIOACTIVE MATERIALS	> LEVELS IN 6480.11	KEEP	KEEP	" " " " " } SEE ATTACHED
X RAY	DOESN'T MEET ANSI X-RAY STANDARDS	KEEP	SCREEN OUT	NONE PRESENT
TOXIC MATERIALS	MASS/1000 ft³ > IDLH/2	KEEP	SCREEN OUT	INVENTORY ATTACHED
REACTIVE MATERIALS	HAZARD LEVEL > 2 PER EPM—12.0	KEEP	SCREEN OUT	NONE PRESENT
FLAMMABLE MATERIAL	>110 gal (TWO 55-gal DRUMS)	KEEP	SCREEN OUT	NONE PRESENT
EXPLOSIVES	ANY HIGH/CLASS A OR B	KEEP	~~SCREEN OUT~~ KEEP	BATTERIES IN SWITCH GEAR RM. SARUP AGREEMENT # 8 8/29/91 RCK
	>10 oz. OF LOW IN ONE AREA/CLASS C	KEEP	SCREEN OUT	" "
CHEMICAL INCOMPATIBILITY	>2 INCOMPATIBLE CHEMICALS IN SAME AREA	KEEP	SCREEN OUT	INVENTORY ATTACHED
LASERS	CLASS I OR II	SCREEN OUT	SCREEN OUT	
	CLASS III W/BEAM ENCLOSED	SCREEN OUT	SCREEN OUT	
	CLASS III NONENCLOSED BEAM & CLASS IV	KEEP	SCREEN OUT	NONE PRESENT
ELECTRICAL VOLTAGE/ CURRENT	600V AND > 25mA OUTPUT, 50J STORED ENERGY AT 600V	KEEP	KEEP	13.8 KV TO SWITCH GEAR INSIDE BLDG. 8/29/91 RCK
KINETIC ENERGY	"UNIQUE" i.e., HIGH ENERGY FLY WHEEL	KEEP	SCREEN OUT	NO SOURCE PRESENT
PRESSURE	>3000 PSIG	KEEP	SCREEN OUT	" " "
	>0.1 lb TNT EQUIV. ENERGY	KEEP	SCREEN OUT	" " "
TEMPERATURE	RESULTS IN UNACCEPTABLE SITUATION OR BYPRODUCT	KEEP	SCREEN OUT	" " "
BIOHAZARD	SPECIAL CONTROLS REQUIRED	KEEP	SCREEN OUT	" " "
ASPHYXIANTS	EFFECT LARGE NO. OF PEOPLE	KEEP	SCREEN OUT	" " "
OTHER OR UNKNOWN				

MARTIN MARIETTA

Internal Correspondence

MARTIN MARIETTA ENERGY SYSTEMS, INC.

May 25, 1989

O. B. Morgan

ORNL Facility Hazard Classification

The Facility Hazard Classification data you requested in your May 9, 1989, letter does not apply to the Applied Technology Division's facilities. A safety study is not required since the facilities involved in the Centrifuge Facility Cleanup Project at the K-25 Plant have radiological hazard levels below that on the classification guidelines you provided. Our Eldon Arnold discussed the guidelines with Jeff Hedges, and they agreed a summary of the uranium content of each building would be sufficient.

The Centrifuge Facility Cleanup Project is a five-year effort to remove centrifuges and centrifuge-related equipment from ten process buildings at the K-25 Plant. The uranium content of each building to be cleaned during the project is as follows:

Facility	Kg Uranium in Centrifuges*	Kg Uranium in Piping	Total
K-1210	28.89	12.11	41.0
K-1210-A**	--	--	--
K-1600	0.27	2.73	3.0
K-101	0.18	1.82	2.0
K-1024	--	--	--
K-1023	--	--	--
K-1052	0.74	1.26	2.0
K-1200	7.54	4.46	13.0
K-1004-S	--	--	--
TOTAL	38.62	22.38	61.0

The average assay of this uranium is 0.72 wt % U-235 with a maximum assay of 3.0 wt % U-235.

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* Includes rotors and casings as well.

** Not included in official inventory because machines have been in and out of other facilities. For hazard studies, a total of 4 Kg U should be used.

The alpha contamination levels on floors and walls, except for a few isolated areas, is below a total of 5,000 αd/min/100 cm^2 and below 1,000 αd/min/100 cm^2 transferable. The direct gamma radiation from machines and pipes is below 1 mrad/hr with no indication of pronounced variation along the length of machines or piping.

If you need additional information, you may contact Eldon Arnold (6-0336).

Dan A. Waters

D. A. Waters, K-1225, MS-7291 (6-0307)

DAW:EDA:thf

cc: J. W. Amburgey
✓E. D. Arnold
J. Hedges
M. L. Jones
File - DAW - NoRC

west Utility Room

Material Name Chemtrol 19

QUANTITY 1 UNIT GAL

IS A MSDS NEEDED No

Material Name Demineralizer Resin IRC-718 (Amberlite)

QUANTITY 58 UNIT GAL

IS A MSDS NEEDED

Material Name Dow Corning 200 Fluids ← What is the chemical make up?

QUANTITY 37 UNIT ~~DRUM~~ CONT ← MSDS attached

IS A MSDS NEEDED

N
K-25
VAULT. 5/21/91

East Cage Area K-1210A Outside

Material Name Freon TF

QUANTITY 17 UNIT DRUM ← 30 gal drums

IS A MSDS NEEDED

-1210A

Material Name Handy Oil

QUANTITY 3 UNIT CAN

IS A MSDS NEEDED

Material Name Inland 19

QUANTITY ~~0~~ 1 UNIT OT

IS A MSDS NEEDED

Material Name Isopropyl Alcohol

QUANTITY 7 UNIT GAL

IS A MSDS NEEDED No

Please xerox form if additional space is needed.

INTEGRATION OF CPDF WITH CENTRIFUGE DEVELOPMENT FACILITIES

ADVANCED MACHINE DEVELOPMENT LABORATORIES (AMDL)

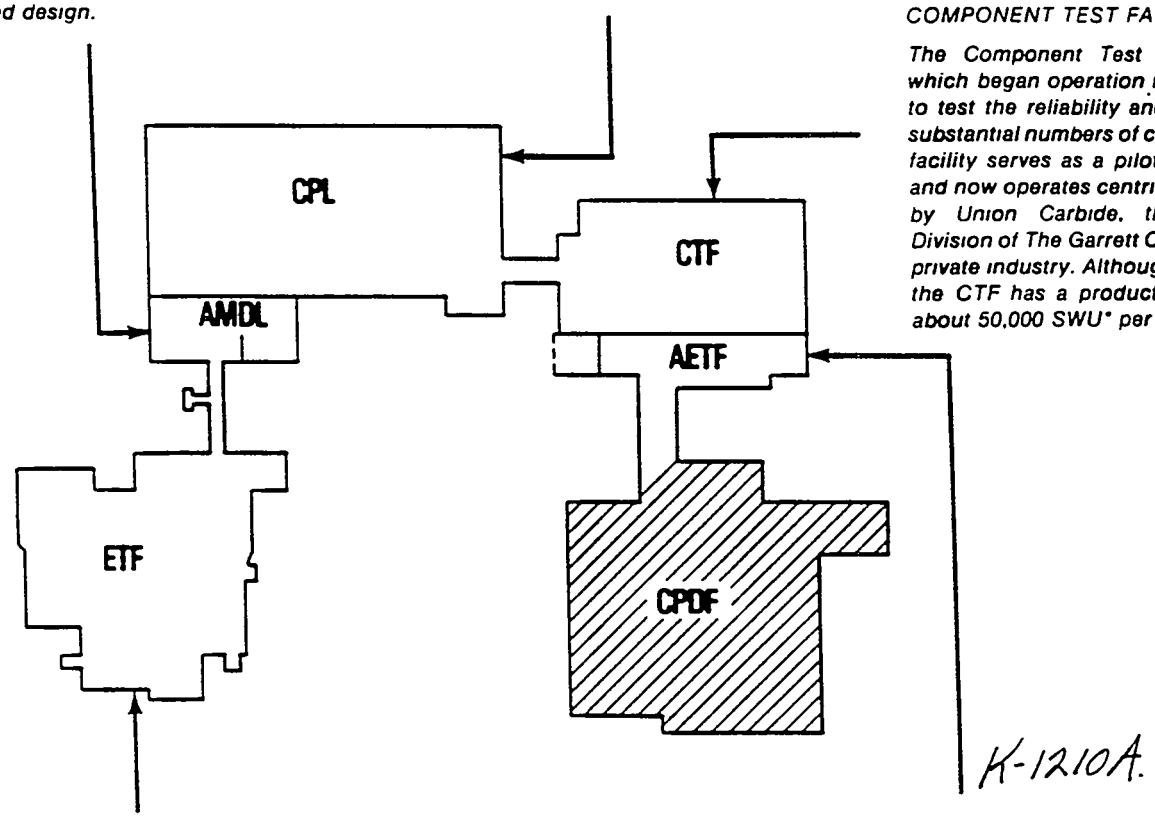
The Advanced Machine Development Laboratories (AMDL) are used for testing and improving centrifuges of advanced design.

COMPONENT PREPARATION LABORATORY (CPL)

Completed in 1974, the Component Preparation Laboratory (CPL) was built to aid the development and demonstration of techniques for manufacturing centrifuges and to reduce the time and cost of the manufacturing process. These manufacturing techniques are being provided to private industry.

COMPONENT TEST FACILITY (CTF)

The Component Test Facility (CTF), which began operation in 1975, is used to test the reliability and operability of substantial numbers of centrifuges. This facility serves as a pilot plant cascade and now operates centrifuges produced by Union Carbide, the AiResearch Division of The Garrett Corporation, and private industry. Although a test facility, the CTF has a production capacity of about 50,000 SWU per year.*



EQUIPMENT TEST FACILITY (ETF)

The Equipment Test Facility (ETF) began operation in 1971 for the purpose of examining the reliability of four types of high-capacity centrifuges. Reliability testing of some of the earlier models of centrifuge machines is continuing.

ADVANCED EQUIPMENT TEST FACILITY (AETF)

The Advanced Equipment Test Facility (AETF) became operational in the spring of 1978. This facility is used primarily to test the reliability of the production centrifuges that will be used in the demonstration facility (CPDF) and the full-size plant (GCEP). The facility is also operated to test plant subsystems.

*A separative work unit (SWU) is a measure of the effort expended in a uranium enrichment plant to separate uranium of a given ^{235}U content into two components, one having a specified higher percentage of ^{235}U and the other having a specified lower percentage of ^{235}U.